


The testing-effect  
under investigation

## Experiences in Kiel

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Centre for Learning Sciences and Technologies  
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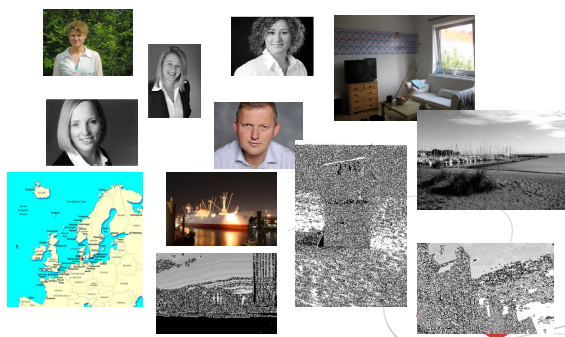
## Overview

- Kiel and Colleagues
- What is IPN?
- What research is conducted at the IPN?
- How is research financed and organized at the IPN and Germany?
- And what is your thesis about?

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## Kiel and colleagues




## IPN

- Leibniz Institute for Research on Science and Mathematics Education
- Five departments:
  - Biology education (Prof. U. Harms)
  - Chemistry education (Prof. I. Parchmann)
  - Mathematics education (Prof. A. Heinze)
  - Physics education (Prof. M. Euler)
  - Educational sciences (Prof. O. Köller)
  - Research methodology (Prof. O. Köller)

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Leibniz-Institut für die Pädagogik der Naturwissenschaften und der Mathematik

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## Research areas IPN:

1. Aims and models of mathematics and science education;
2. Prerequisites and evaluation of concepts for mathematics and science instruction;
3. Implementation and evaluation of concepts for mathematics and science instruction;
4. Pedagogical – psychological diagnostics and research methodology;
5. Educational monitoring;
6. Mathematics, science and technical education in out-of-school learning locations;
7. Fostering talents and competitions.

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## Research projects at IPN:

1. ELBE (Detection of Cognitive Learning Processes and Eye-Movements using Eye-Tracking-Methodology)
2. Sinus (Increasing the Efficiency of Mathematics and Science Education in Primary Schools)
3. Chemnet (E-learning)
4. Kondiff (Competence models as a basis for a diagnosis-supported individual support of students in primary and secondary school)

www.ipn.uni-kiel.de

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### Research projects at IPN:

- Large scale projects
- Multiple researchers involved (1-3 post-doc, 1-2 phd's, professor)
- Each post-doc and phd has, within the project, his own research field (studies)
- Phd candidates get only 50% or 67% of a fulltime fee to run the project. The dissertation is own responsibility.
- Generally no additional courses (ICO) but recently some universities start up grad schools.



### IPN Financing

- Part of Leibniz community (86 research institutes: sciences, engineering, environmental-, social- and mental health sciences).
- Partly paid by the federal state (Bundesland) and partly by the state.
- 2 other communities compete for money: Max planck institutes and Fraunhofer institutes.
- Other research incomes: DAAD (exchanges, conferences)



### My research at the IPN

1. Do tests influence study behavior?
2. Do self judgments influence study behavior?

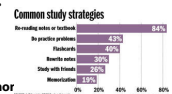


### My Dissertation thus far

- Study 1: Study behavior of students (of different educational levels) and metacognitive awareness of testing.

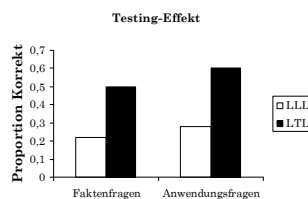
- Students see tests as:

- Learning tool: "When I make a test, I can remember more"
- Diagnostic tool: "A test makes clear to me what I know and what I do not know".
- Instruction tool: "A test gives me insight in the questions that the teacher will ask".



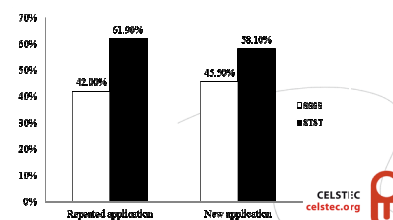
### My Dissertation thus far

- Study 2: Is testing also beneficial for application of principles and procedures?



### My Dissertation thus far

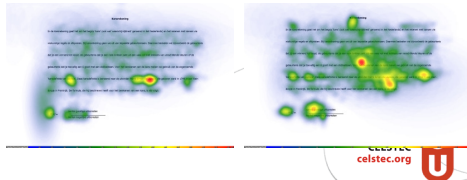
- Study 3: Is testing also beneficial for transfer of principles and procedures to new application questions?



## My Dissertation thus far



- Study 4: Can cueing effects explain the testing - effect?
- Expectations:



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## My last year



Writing, writing and even more writing.....

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